UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,851	01/23/2001	Kenichi Sanpei	450100-02949	3091

20999 7590 05/19/2005

FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER	
MISLEH, JUSTIN P	
ART UNIT	**PAPER NUMBER**
2612	

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/768,851	SANPEI, KENICHI	
	Examiner	Art Unit	
	Justin P. Misleh	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 April 2005 has been entered.

Response to Arguments

2. Applicant's arguments filed 28 April 2005 have been fully considered but they are not persuasive.

3. Applicant argues Parulski et al. does not disclose or suggest an image photographing apparatus for photographing a still image comprising a control means and the control period of said control means being set in correspondence within the read-out period of said detection area.

4. The Examiner disagrees with Applicant's position. On column 8 (line39) – column 9 (line 9), Parulski et al. indicates that the AF mode lasts for an indefinite period of time and after that indefinite period of time a final image is then integrated. More specifically, Parulski et al. states, "the process of integrating and reading out the focus image is then repeated – numerous times as the lens focus is adjusted until it provides the maximum average contrast – the focus is acceptable." Therefore, the control means cannot integrate the final image until the focus is acceptable – i.e. the control means control period switchover (from AF period to still image

capture period) is determined by the read-out period of the detection area. Likewise, Parulski et al. does in fact disclose an image photographing apparatus for photographing a still image comprising a control means and the control period of said control means being set in correspondence within the read-out period of said detection area.

5. Applicant additionally argues Parulski et al. does not disclose or suggest wherein the control means controls at least two scan speeds with a first scan speed being used outside the detection area and a second scan speed being used with the detection area, the first scan speed being greater than the second scan speed, a predetermined value associate with a pulse counter begin used by the control for determining a switching point between speeds.

6. Again, the Examiner disagrees with Applicant's position. Parulski et al. teach that during a focusing mode "a top portion of the image is rapidly read out and discarded using 'fast flush' clocking where the vertical and horizontal registers are continuously clocked the fast dump gate FDG remains high" (see column 8, lines 45 – 51). Parulski et al. further states that the "vertical clock sequence is then set to a line skipping operation ... while the small number of remaining lines in the central area image are clocked out" (see column 8, lines 51 – 55). In other words, Parulski et al. that outside the detection area ("top portion") the vertical and horizontal registers are "rapidly" and "continuously" clocked and while in the detection area ("central area") the vertical register is slowed and is not continuously clocked ("vertical clock sequence is then set a line skipping operation"). Figure 4 shows the central area (66) and column 5 (line 54) – column (line 34) teaches how the timing and control section (27) functions as a pulse counter with a predetermined value (corresponding to the lines in the central area). Thus, it is clear that Parulski et al. does in fact disclose wherein the control means controls at least two scan speeds

with a first scan speed being used outside the detection area and a second scan speed being used with the detection area, the first scan speed being greater than the second scan speed, a predetermined value associate with a pulse counter begin used by the control for determining a switching point between speeds.

7. The Examiner accepts Applicant's amendment to the title; there are no further objections to the specification.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 1 – 20** are rejected under 35 U.S.C. 102(b) as being anticipated by Parulski et al.

10. For **Claims 1 and 6**, Parulski et al. disclose, as shown in figures 1, 4, 5, 8, and 9 and as stated in columns 4 (lines 49 – 59), 5 (lines 54 – 67), 6 (lines 1 – 14, 19 – 22, and 26 – 33), 8 (lines 6 – 67), and 9 (lines 1 – 8), an image photographing apparatus and method of operating thereof for photographing a still image, comprising:

a scanning imaging device (sensor 20; see figure 4) for generating image signals; and

a control means (processor section 35; see figure 1) for using the image signals generated by said imaging device (sensor 20) to adjust the still image before photographing (As shown in figure 9, adjustment of focus is performed before photographing), said control means (processor section 35) defining a detection area (central focusing area 66) which is both vertically and

horizontally limited within said imaging device (sensor 20) and reading only the image signals within the detection area (central focusing area 66) out of said imaging device (sensor 20), the read image signals being used to adjust the still image before photographing and a control period of said control means being set in correspondence within a read-out period of said detection area (see below for explanation).

As shown in figure 4, "only a small number lines in the central focusing area 66 of the image are used to provide the focus determination input data." As shown in figure 5, "the average contrast could be computed for a center region 80, a left central region 82, and the right central region 84." In figure 4, the detection area is vertically limited to a small number of lines and horizontally limited by the pixel plane (as in Applicant's figure 4) and further, in figure 5, the detection area is vertically limited to a small number of lines and horizontally limited to central regions.

On column 8 (line39) – column 9 (line 9), Parulski et al. indicates that the AF mode lasts for an indefinite period of time and after that indefinite period of time a final image is then integrated. More specifically, Parulski et al. states, "the process of integrating and reading out the focus image is then repeated – numerous times as the lens focus is adjusted until it provides the maximum average contrast – the focus is acceptable." Therefore, the control means cannot integrate the final image until the focus is acceptable – i.e. the control means control period switchover (from AF period to still image capture period) is determined by the read-out period of the detection area.

11. For **Claims 11 and 16**, Parulski et al. disclose, as shown in figures 1, 4, 5, 8, and 9 and as stated in columns 4 (lines 49 – 59), 5 (lines 54 – 67), 6 (lines 1 – 14, 19 – 22, and 26 – 33), 8

(lines 6 – 67), and 9 (lines 1 – 8), an image photographing apparatus and method of operating thereof for photographing a still image, comprising:

a scanning imaging device (sensor 20; see figure 4) for generating image signals; and

a control means (processor section 35; see figure 1) for using the image signals generated by said imaging device (sensor 20) to adjust the still image before photographing (As shown in figure 9, adjustment of focus is performed before photographing), said control means (processor section 35) defining a detection area (central focusing area 66) within said imaging device (sensor 20) and reading only the image signals within the detection area (central focusing area 66) out of said imaging device (sensor 20), the read image signals being used to adjust the still image before photographing; and

wherein the control means controls at least two scan speeds with a first scan speed being used outside the detection area and a second scan speed being used with the detection area, the first scan speed being greater than the second scan speed, a predetermined value associate with a pulse counter begin used by the control for determining a switching point between speeds (see below for explanation).

Parulski et al. teach that during a focusing mode "a top portion of the image is rapidly read out and discarded using 'fast flush' clocking where the vertical and horizontal registers are continuously clocked the fast dump gate FDG remains high" (see column 8, lines 45 – 51). Parulski et al. further states that the "vertical clock sequence is then set to a line skipping operation ... while the small number of remaining lines in the central area image are clocked out" (see column 8, lines 51 – 55). In other words, Parulski et al. that outside the detection area ("top portion") the vertical and horizontal registers are "rapidly" and "continuously" clocked and

while in the detection area ("central area") the vertical register is slowed and is not continuously clocked ("vertical clock sequence is then set a line skipping operation"). Figure 4 shows the central area (66) and column 5 (line 54) – column (line 34) teaches how the timing and control section (27) functions as a pulse counter with a predetermined value (corresponding to the lines in the central area). Thus, it is clear that Parulski et al. does in fact disclose wherein the control means controls at least two scan speeds with a first scan speed being used outside the detection area and a second scan speed being used with the detection area, the first scan speed being greater than the second scan speed, a predetermined value associate with a pulse counter begin used by the control for determining a switching point between speeds.

12. As for **Claims 2, 7, 12, and 17**, Parulski et al. disclose an image photographing apparatus and method of operating thereof according to Claim 1/6, respectively, wherein said control means (processor section 35) also controls said imaging device (sensor 20) when the still image is being photographed.

Parulski et al. states, in column 4 (lines 28 – 39), "The output of the image sensor 20 is amplified and processed in an analog gain and sampling (correlated double sampling (CDS)) circuit 32, and converted to digital form in A/D converter 34. The A/D output signal is provided to a processor section 35, which includes a digital processor 36 which temporarily stores the still images in a DRAM memory 38. The digital processor 36 then perform image processing on the still images, and finally stores the processed images on the removable memory card 26 via a memory card interface circuit 40, which may use the PCMCIA 2.0 standard interface. An EPROM memory 42 is used to store the firmware which operates the digital processor 36."

13. As for **Claims 3, 8, 13, and 18**, Parulski et al. disclose an image photographing apparatus and method of operating thereof according to Claim 1/6, respectively, wherein said control means (processor section 35) determines a start position of the detection area (central focus area 66) and the amount of image to be read out within the detection area, and, accordingly, only the image signals within the detection area (central focus area 66) are read out of the said imaging device (sensor 20).

Parulski et al. states, in column 4 (lines 22 – 28), "Control of the sensor 20 is provided by a timing and control section 27, which specifically includes a sensor timing circuit 28. The sensor timing circuit 28 provides the signals to enable sensor drivers 30, which provides horizontal clocks (H1, H2) and vertical clocks (V1, V2), as well as a signal FDG for activating a drain structure on the sensor 20."

Furthermore, Parulski et al. states, in column 6 (lines 26 – 34), "In the autofocus mode, the timing and control section 27 controls the fast dump structure 62 to A) eliminate all lines of image charge in the outer area 68 (FIG. 4) outside the central focusing area 66, and B) eliminate at least one line of image charge from the image sensor 20 for every one or more lines of image charge that are transferred to the horizontal register 60 for readout from the central focusing area 66."

14. As for **Claims 4, 9, 14, and 19**, Parulski et al. disclose an image photographing apparatus and method of operating thereof according to Claim 1/6, respectively, wherein said control means (processor section 35) allows a high-speed scan in a region (outer areas 68) before the start position of the detection area (central focus area 66), allows a predetermined-speed scan in the detection area, and allows only the determined amount of image signals to be read out.

Parulski et al. states, in column 4 (lines 54 – 66), "FIG. 4 shows a representative portion of the image sensor 20 which provides the data used to focus the image in the focusing operating mode. Only a small number of lines in a central focusing area 66 of the image are used to provide the focus determination input data. For the progressive scan sensor, the other lines in the outer area 68 are quickly read from the image by continuously holding the fast dump structure 62 at a high positive potential, as the vertical clocks are cycled high and low to transfer lines of charge to the substrate via the fast dump drain. Since the image charge for the non-used lines are quickly flushed from the sensor, this operation is referred to as a 'fast flush' and the focus mode is thus described as a fast flush focus mode."

15. As for **Claims 5, 10, 15, and 20**, Parulski et al. disclose an image photographing apparatus and method of operating thereof according to Claim 1/6, respectively, wherein, based on the read image signals, at least one of automatic focus control, automatic photographic sensitivity control, and automatic white balance control is performed.

Parulski et al. performs automatic focus control on the read image signals.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 5:00 PM and on alternating Fridays from 8:00 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wendy R Garber can be reached on 571.272.7308. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
May 16, 2005

WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2500